

Pursuant to Rule 56 of the Federal Rules of Civil Procedure, Defendant the United States of America responds as follows to “Plaintiff’s Proposed Findings of Undisputed Material Facts In Support of Its Response in Opposition to the United States’ Motion for Partial Summary Judgment on Phase Two Issues” (“Exxon’s Opp. PF” or “Exxon’s Opposition Proposed Findings”) submitted by Plaintiff Exxon Mobil Corporation (“Exxon”) on March 23, 2018. *See* ECF No. 209-2 in Case No. 4:10-CV-02386, and ECF No. 140-2 in Case No. 4:11-CV-01814.¹

In response to Exxon’s Opposition Proposed Findings, where the United States disputes or partially disputes a proposed finding, the United States has: (1) summarized the grounds supporting the dispute; (2) made reference to a pertinent paragraph of a sworn affidavit of a United States expert witness, an expert report, and/or a supporting document;² and/or (3) made reference to pertinent pages or paragraphs of the United States’ Memorandum in Support of Motion for Summary Judgment on Phase II Issues (“U.S. Mot.”); Opposition to Exxon’s Motion for Partial Summary Judgment on Phase II Issues (“U.S. Opp.”); Statement of Undisputed Facts in Support of Partial Summary Judgment on Phase Two Issues (“U.S. SOF”); the United States Responses to Plaintiff’s Proposed Findings of Undisputed Material Facts (“U.S. Resp. to Exxon PF”); or other enumerated Responses within this filing (“U.S. Resp. to Exxon Opp. PF”), that show the basis for the dispute. *See* ECF Nos. 202-1, 202-2, 212, and 212-2 in Case No. 4:10-CV-10-2386, and ECF Nos. 133-1, 133-2, 142, and 142-2 in Case No. 4:11-CV-01814.

References to “U.S. Ex.” are to the United States’ Phase II exhibits filed in support of the United States’ Motion for Partial Summary Judgment on Phase Two Issues and in support of the United

¹ For the Court’s convenience, the United States copied Exxon’s Opposition Proposed Findings, though some of the formatting may not appear exactly as in Exxon’s filing. The United States did not copy schematics, diagrams, or footnotes included in Exxon’s Opposition Proposed Findings.

² References to documents submitted by Exxon in its Appendix are cited as “A#”.

States' Opposition to Exxon's Consolidated Motion for Summary Judgment as to Phase 2 Cost and Allocation Issues. References to "Exxon Ex." are to exhibits filed by Exxon in support of its Consolidated Motion for Summary Judgment as to Phase 2 Cost and Allocation Issues.

In several of its Proposed Findings, Exxon has referred to its experts as having a particular expertise. The United States reserves the right to challenge the qualifications of Exxon's experts at the appropriate time. Additionally, any statement not expressly addressed is disputed.

1. Various, wartime-era news articles by *The Oil & Gas Journal*, such as, for example, "How One Company's Whole Refining Capacity Was Turned to War" and "Largest U.S. Refinery Incorporates Many War Operations", chronicled how the Baytown Facility was greatly expanded with the construction of many new or modified process units to convert the Facility into a war production plant to greatly increase avgas and other war products production. A010407; A010410.

PARTIALLY DISPUTED. The articles speak for themselves. To the extent Exxon implies that that the articles state that the Baytown Facility was greatly expanded during wartime and not before, the United States disputes that implication. One of the articles states that by the time of Pearl Harbor, "[p]rocesses for the manufacture of synthetic toluene and high-octane aviation gasoline in great quantities had already been perfected, and synthetic rubber from petroleum was about to emerge from the laboratory." A10407. Additionally, the articles do not support the implication that all production was for the war effort.

2. The regular telegrams sent by the PAW to individual refineries, such as the Baytown and Baton Rouge refineries, often directed the refineries to increase and maximize the production of not only avgas, but also lower grades of avgas, such as 91-octane avgas, 87-octane avgas, and other types of avgas, and increase the production of avgas components and intermediates. A000408-A000409; A000410; A000411-A000413; A000414-A000415; A000591-A000592.

PARTIALLY DISPUTED. The cited telegrams speak for themselves. In particular, they are addressed to groups of refineries, not individual refineries. See also U.S. Resp. to Exxon PF ¶ 82.

3. Both parties' technical experts, including Government expert Dr. James Kittrell and Exxon experts Messrs. David Lerman and Jere Johnson, concurred that gas oils that result from the processing of the crude oil in the distillation units were further processed in the FCC units to produce avgas components for additional avgas production. Ex. 9, Att. B, Lerman 2015 Rpt. at 22; Ex. 8, Att. B, J. Johnson 2012 Rpt. at 16-17; Gov. Ex. 18, Expert Rebuttal Report of Dr. James R. Kittrell (Sep. 22, 2016) at 43.

PARTIALLY DISPUTED. The cited expert reports speak for themselves. Additionally, the term “gas oil” is a generic term for intermediate refinery products. Some refinery intermediates could have been used for feed stock to the FCC Unit, while others were not. Additionally, the United States disputes that light gas oils were substantially produced from crude oil that was processed in the Exxon refineries. Instead, some light gas oils processed in the FCC Units were obtained as shipments from other refineries, and were not derived from the distillation or cracking of crude oil in Exxon refineries. U.S. Ex. 18, Dr. James R. Kittrell Supplemental Report 11, 23, Appendix 2 (Sept. 2016). Furthermore, the phrase “additional avgas production” is vague and ambiguous. Exxon does not specify whether the phrase means in addition to that produced before the war, before the installation of the FCC Units, or during some other time period.

4. According to the treatise *The History of Humble Oil & Refining Co.*, the Baytown Refinery “produced for military use tremendous quantities of other gasolines, fuel oils, lubricants, asphalt for airplane runways, fuel for flame throwers and smoke screens, and scores of other products”. A010414.

PARTIALLY DISPUTED. The quoted document speaks for itself. The document goes on to state, “And in addition to its manufacture for direct use by the armed forces, it provided greater quantities of products for war industry and for countless civilian needs.” A010414.

5. According to an internal, wartime Baytown refinery memorandum, “Baytown has supplied considerable quantities of refined products for our Allies under the Lend-Lease program which have been purchased through the Navy. These products include motor gasoline, burning oil, vaporizing oil, gas oil, diesel fuel, lubricating oil and bunker fuel oil.” A000396.

PARTIALLY DISPUTED. The quoted document speaks for itself. The document goes on to state, “This Lend-Lease business is dependent on competitive bidding with the resultant allocation to Baytown being irregular and unpredictable.” A000396.

6. Most of the alkylate – an avgas component – produced by the Baton Rouge refinery was shipped to other refineries; for example, a 1944 Baton Rouge document indicated that the refinery would produce 12,030 B/D of alkylate, but ship 8,000 B/D of this alkylate to other refineries. A010416.

PARTIALLY DISPUTED. The quoted document speaks for itself. Notably, the document provides information for one month only—July 1944, and does not support the statement that “most of the alkylate . . . was shipped to other refineries.” The United States does not dispute that Exxon shipped some amount of alkylate from the Baton Rouge refinery, but the United States disputes any implication that the alkylate shipped from the Exxon refineries was manufactured exclusively from raw materials originating as crude oil processed in the Exxon refineries. U.S. Ex. 19, Dr. James Kittrell Supplemental Expert Report at 15, 20, 31 (Apr. 2013); *see also* U.S. Ex. 18, Kittrell 2016

Supplemental Report at 20 (reflecting that 4,545 b/d of alkylate was required for the production of avgas and all of that alkylate was derived from imported stocks).

7. Humble acknowledged that the entire Baytown refinery was converted to war products production during WWII, stating in a 1943 internal memorandum the following: At first glance it might appear that this represents less than one- third conversion to the manufacture of war products but this is hardly true, since, in order that these war products be made, it is unavoidable that other products, such as motor gasoline, kerosene, heating oil, and residual fuel oil, be made as byproducts. . . . The current production of war products represents essentially 100% conversion since all of the crudes and other raw materials taken into the refinery are run specifically for the production of one or more war products. Should any of the crudes be reduced in quantity, the output of war products would suffer. Specific records of all other refineries are not available but, based on such information as is available, it appears that the Humble's Baytown refinery is making more war products than any other refinery in this country either in terms of the percentage of these products on the refinery input or in terms of total volume. A000395.

PARTIALLY DISPUTED. The quoted document speaks for itself. The United States disputes that the Baytown refinery was “converted to war products production.” See U.S. Resp. to Exxon PF ¶¶ 4, 104, 109-10.

8. All of the byproducts of crude distillation for avgas production identified in the production output schematic set forth in a June 1943 report titled “Data on War Projects” that Humble submitted to the Government as part of a Government inspection of the Baytown Facility were either war products or raw materials used to produce war products (collectively for this proposed fact “war products”) for the Government's war effort. A000890; see PF ¶ 94. Some of the key factual bases establishing that these byproducts were war products for the Government is summarized below:

- a. Gas (Refinery Fuel) – 12.9% product output: This was a war product because it was used as fuel to run the crude distillation and other process units that were operated to produce avgas and other war products; in fact, both a 1939 and 1945 Baytown refinery flow diagram indicates this as well. A000890; A010417; Ex. 9, Att. B, Lerman 2015 Rpt. at 10 (Figure 2).
- b. Residual Fuel Oil – 10.6% product output: This was a war product because PAW regularly directed the Baytown and Baton Rouge refineries to produce maximum quantities of residual fuel oil, PF ¶ 130.d, and a Government report identified it as a “product[] for war”, stating further that “[r]esidual fuel oil, the heavy oil that is used

primarily for industrial and railroad purposes, and for bunkering those ships not designed for Navy Special, fluctuated continually throughout the war from a position of feast to one of famine. . . . Frequent changes in refinery yields had to be made, therefore, to deal with the residual situation; now more, now less as the war situation varied.” PF ¶ 136.

- c. Unfinished Lube Distillates – 2.1% product output, Lube Oils – 1.0% product output, and Military Lubes – 2.5% product output: These were war products because PAW regularly directed the Baytown and Baton Rouge refineries to produce maximum quantities of these products, PF ¶ 130.b, and a Government report identified them as “products for war,” stating further that “[l]ate in 1942, when PAW received the military requirements for aviation engine oils and for heavy duty engine oils for ground and marine equipment, it was immediately evident that they could not be filled without seriously jeopardizing the supply of essential industrial and transportation lubricants. A lubricating oil advisory committee was appointed by PAW to work with it in meeting the situation. . . . As a result, all military and essential industrial requirements for aviation engine and heavy duty oils were filled when needed.” PF ¶ 138.
- d. Gas Oils – 10.7% product output: This was a war product because the parties’ technical experts agreed that gas oils were further processed in the FCC units for the production of avgas and avgas components, RF ¶ 3; in fact, separate, wartime refinery flow diagrams for both the Baytown and Baton Rouge refineries depict that the gas oils from the crude distillation units were sent to the FCC units for processing into avgas components. A000913; A010417. In addition, a Government report identified gas oils as one of the “products for war”, stating further that “[o]ne of the factors that made for uphill going was the fact that the charging stock, or raw materials, used in the catalytic cracking units is a middle-of-the-barrel product, known as gas oil, and gas oil ordinarily is part of the blend in heating oil. These catalytic crackers, together with certain reforming units, supplied base stock for avgas, butadiene for synthetic rubber, and toluene for TNT; and so, obviously the requirements for feed stock for them became progressively higher.” PF ¶ 135. The Baytown refinery also supplied a substantial amount of gas oils to the U.S. Navy for the Allied Forces under the Land-Lease Program. A000396.
- e. Heating Oils – 5.4% product output: A Government report identified heating oil as one of the “products for war”, stating further that “[a]lthough generally speaking, supplies were consistently tight nation- wide, the Government-industry team was able throughout the war to meet all military and essential civilian

requirements for distillates; the so-called ‘middle of the barrel’ products, such as household heating oil, kerosene, and tractor fuels.” PF ¶ 137.

- f. Navy Diesel Fuel – 1.9% product output: This was a war product because PAW regularly directed the Baytown and Baton Rouge refineries to produce maximum quantities of this product, PF ¶ 130.c, and a Government report identified it as one of the “products for war,” stating further that “[t]he vastly expanding naval action in all parts of the world created a heavy demand for special high-cetane Diesel fuel oil.” PF ¶ 134. “This fuel was used in submarines, LST’s and in several other types of equipment.” A000208. The Baytown refinery also supplied a substantial amount of diesel fuel to the U.S. Navy for the Allied Forces under the Land-Lease Program. A000396.
- g. Toluene and Xylene – 3.3% product output: These were war products because PAW regularly directed the Baytown and Baton Rouge refineries to produce maximum quantities of these products. PF ¶ 130.f. Xylene was an essential avgas component, Ex. 5, Att. C, Beath 2014 Supp. Rpt. at 7, Ex. 8, Att. B, J. Johnson 2012 Rpt. at 44, 59, and a Government report identified toluene as one of the “products for war”. A000209.
- h. Gasoline – 17.9% product output: This was a war product because PAW regularly directed the Baytown and Baton Rouge refineries to produce maximum quantities of this product, PF ¶ 130.g; in fact, in one telegram PAW compared the critical need for ample supplies of gasoline to avgas, stating that “[n]o compromise can be made with the requirements of the ground forces, since in the last analysis, it is just as important that the ground forces have motor fuel as it is for the air services to have aviation gasoline.” PF ¶ 133 (emphasis omitted). In addition, a Government report identified gasoline as one of the “products for war”, stating further that “[i]f 100-octane aviation gasoline was the war’s No. 1 glamor product, there is no question that 80-octane all-purpose gasoline was the No. 1 ‘jack of all trades.’” This gasoline was specifically tailored for military use and “in March 1942, the Army made it known that it must have a very special kind of 80-octane, usable in all climates and temperatures.” PF ¶ 132. The Baytown refinery also supplied a substantial amount of motor gasoline to the U.S. Navy for the Allied Forces under the Land-Lease Program. A000396.

PARTIALLY DISPUTED. The United States does not concede that the term “byproducts” accurately describes the status of products other than avgas. *See* U.S. Resp. to Exxon PF ¶ 94; U.S. Ex. 20, Dr. James R. Kittrell Rebuttal Report 16-18 (Nov. 2012); U.S. Ex. 21, Dr. James R. Kittrell Expert Report 22 (Aug. 2012). Additionally, “gas” is not a product at all.

It is a raw material, and is part of a category called “gas/losses,” part of which is the gas used to fuel the refinery. The “losses” is the difference between the charge to the refinery and the finished product. As used in the citations by Exxon, “gas” does not include “losses.” See U.S. Ex. 294, John M. Beath Supplemental Expert Report 27-28 (Nov. 6, 2014). Moreover, the cited documents speak for themselves. The United States disputes the relevance of any labels applied to certain products. See, e.g., U.S. Ex. 159, Production of War Products at Humble Oil & Refining Company’s Baytown Refinery, BAYHIS-00024502 at 00024503 (Feb. 1943) (motor gasoline, kerosene, heating oil, and residual fuel oil “are not classified as war products” but “are nevertheless playing an important part in the nation’s war economy”). See U.S. Resp. to Exxon PF ¶¶ 94, 130-40; see also U.S. Resp. to Exxon Opp. PF ¶ 3 (gas oil). Although portions of the above-listed products may have been sold to the government or used to make products sold to the government, the United States disputes that the entirety of these products should be included in the cost pool for allocation at Step 2. See U.S. Mot. at 58, 62-63; U.S. Opp. at 40, 57-61.

9. On November 28, 1945, A. P. Frame, who was the Director of the Refining Division for PAW, made a statement in a hearing before the Special Committee Investigating Petroleum Resources of the United States Senate regarding “wartime petroleum policy under the Petroleum Administration for War”, and as part of that statement, Mr. Frame stated the following regarding the petroleum industry during the war:

It had met every demand of the military for all kinds of petroleum products. The small refiners as well as the larger ones had been required to utilize their productive capacity to the maximum. It had willingly pooled its technical know-how, its operating experience, and even its products for the common good. It had in effect been operated as if its various refineries were component parts of one huge Nation-wide refinery. A010422 (emphasis added).

Not Disputed that the document is accurately quoted. But see U.S. Resp. to Exxon PF ¶¶ 59, 73, 79, 82, 83, 105, 126, 128. See also U.S. Ex. 8, Dr. Jay Brigham Expert Report 6-8 (Nov. 2012).

10. Government expert Dr. Kittrell testified as follows at his deposition regarding the lack of factual support for his assumption that imported materials were used first and only used for avgas production at the Baytown and Baton Rouge refineries during WWII:

Q. What is the basis for your opinion that the refinery would use all the imports first before using product from the refinery, per se?

A. Again, that the same provision that we talked about for Baton Rouge. These were being arranged and imported for a reason. Somebody, PAW or somebody, believes that on balance, this imported stock is desired, and the two companies agree, whatever the mechanism is, but it’s being imported to be used in avgas.

Q. Is there any other basis for your opinion on this point?

A. Nothing comes to mind at the moment. A010429–A010430.

PARTIALLY DISPUTED. The United States does not dispute that Dr. Kittrell's testimony is accurately quoted, but the preceding statement mischaracterizes Dr. Kittrell's testimony. Dr. Kittrell testified regarding his reasonable assumption that Exxon likely used imported avgas blendstocks that were supplied through the Planned Blending Program.

Q: While we're there, let me ask you a question. If you had imported feed and you had gas oil coming from the crack, which material would be used first?

A: The imported.

Q: Why?

A: Well, it's being imported for a reason. There's no use to import gas oil that I'm aware of that would be of interest to the PAW other than to feed it to a FCC unit. A thermal cracker is not as efficient as an FCC unit in terms of manufacturing products."

....

Q: Going back to the question of imported versus using the gas oil from the crack feed, what's the basis for your opinion that they would use the imported first over the gas oil from the cracked crude?

A: Again, the reason it's being imported – PAW would have no interest in importing a non-avgas material. So the reason it's being imported is to be used, to be cracked into avgas.

U.S. Ex. 287, Dr. James Kittrell Dep. 45, 6-18; 46, 7-16 (Apr. 29, 2015). *See also* U.S. Ex. 18, Kittrell 2016 Supplemental Report 24-26.

Dr. Kittrell's assumption is supported by the Planned Blending Program itself.

Control of 100-octane production was extended and detailed to the point where, each month, PAW issued a Planned Blending Schedule, by which each refiner was given specific instructions as to the composition of his blends, the sources from which he was to obtain components, and to whom he was to ship other components – all to the end that the utmost possible 100-octane could be forced each month from the available facilities.

U.S. Ex. 62, J. Frey & C. Ide, *A History of the Petroleum Administration for War*, MIS-00022327-843 at MIS-00022571. *See also* Phase I Decision at 495; U.S. Resp. to Exxon PF ¶¶ 62, 105, 153.

11. During a deposition Dr. Kittrell acknowledged that his calculations and tables upon which he based his opinion that approximately 50% of the avgas produced at the Baytown and Baton Rouge refineries was produced from imported raw materials did not take into account or deduct the raw materials that these refineries were producing and exporting to other refineries for avgas production, even raw materials produced by the Baytown refinery and shipped to the Baton Rouge refinery, or produced at the Baton Rouge refinery and shipped to the Baytown refinery, testifying as follows in a deposition:

Q. If the refinery was producing more than 8218 barrels per day of FCC feedstocks, what would the refinery do with the more than 8218 barrels of feedstock that it was producing?

- A. It could export them. It could use them in motor gasoline. These aren't prohibited for use in motor gasoline except for the alkylate. It's not supposed to be put in motor gasoline. But it could go to motor gasoline. It could be exported, any number of things.
- Q. So if it was exported and used at another refinery to manufacture a war product, how was that taken into account in your table?
- A. It doesn't take it into account.
- Q. Does your table take into account the production of other 100-octane avgas products such as 87 or 91 high octane?
- A. No. As far as component sources, no.
- ..
- ..
- Q. Does your Table 1.5 assume that none of these designated feeds or the products from these feeds are transferred to other refineries?
- A. It doesn't assume any disposition of those.
- Q. So it doesn't address the potential transfer of war products made from these feeds to other refineries?
- A. No. That presumably would be relevant to their avgas contract, not dealing with the avgas manufactured at these two individual refineries.
- Q. Does it assume the transfer of product between Baytown and Baton Rouge and vice versa?
- A. It doesn't assume anything, but the inputs available for imported materials could have come from the other refinery. I didn't segregate it in that fashion. These are simply inputs. In fact, I'm quite sure some of the codimer inputs into Baytown originated at Baton Rouge, but I haven't isolated that as a separate metric.
- Q. You don't isolate as a separate metric the potential transfer of product from Baytown to Baton Rouge?
- A. No. I'm making avgas blends for each individual refinery. There are inputs and outputs. There are inputs from either refinery, and those are all taken into account. But I don't make any other separate calculations for that.
- Q. So you also don't take into account the metric of transferring from Baytown to Baton Rouge any products that are transferred from Baytown to Baton Rouge?
- A. I do. I just don't identify them separately. Any imports coming into Baytown are included in the import statistics that we're using for availability of these stocks from whatever source, including Baton Rouge.

A010425–A010428.

PARTIALLY DISPUTED. The United States does not dispute that Dr. Kittrell's testimony is accurately quoted, but the United States disputes the preceding statement as irrelevant. The entire line of questioning was based on a hypothetical—that the refineries were producing more FCC feedstocks than necessary and so exporting those feedstocks. Thus, the hypothetical scenario was not addressed in the Table at issue. Moreover, Dr. Kittrell considered the fact that Exxon produced and shipped some avgas components to non-Exxon

refineries. U.S. Ex. 19, Kittrell 2013 Supplemental Report, Appendix 2. Even with that consideration, Dr. Kittrell concluded that about half of the avgas produced during World War II was produced from imported raw materials. U.S. Ex. 21, Kittrell 2012 Report 38.

12. Refinery operations expert Mr. Lerman opined, in part, as follows regarding the “hierarchical rule” of Government expert Dr. Kittrell:

Dr. Kittrell’s methodology applies a hierarchical rule where he assumes the refineries use any materials imported into Baytown and Baton Rouge preferentially to produce avgas versus any other normal use within the refinery. This hierarchical rule has no basis, and is inconsistent with actual refinery practices. As Dr. Kittrell admitted during his deposition, he had no documents or other evidence to show that the Baytown and Baton Rouge refineries preferentially used imports in the production of avgas. Ex. 9, Att. B, Lerman 2015 Rpt. at 24; *see also id.* at 25-29.

PARTIALLY DISPUTED. The quoted expert report speaks for itself. Because the statement does not ask the United States to accept the accuracy of the statement, a more detailed response is not required. Nevertheless, the United States disputes its content. Dr. Kittrell made no such admission, nor did he use the term “hierarchical rule.” See U.S. Resp. to Exxon Opp. PF ¶¶ 10-11.

13. According to refinery operations expert Mr. John Beath, to the extent that any natural gasoline was used to make war products, it would had to have been processed in the light ends fractionation unit which also generated additional waste. Ex. 5, Att. C, Beath 2014 Supp. Rpt. at 5.

PARTIALLY DISPUTED. The cited expert report speaks for itself. Because the statement does not ask the United States to accept the accuracy of the statement, a more detailed response is not required. Nevertheless, the United States disputes its content. Exxon’s own data shows that waste generated by the light ends fractionation unit was minimal compared to that generated by the crude oil and cracking department. See U.S. Ex. 20, Kittrell 2012 Report at 27-29.

14. According to refinery operations expert Mr. Lerman, because the avgas component – hydrocodimer - was so much in demand during the war, significant amounts of hydrocodimer manufactured on-site at the Baytown or Baton Rouge refineries were actually exported to other refineries for avgas production there. Ex. 9, Att. B, Lerman 2015 Rpt. at 29- 30.

PARTIALLY DISPUTED. The cited expert report speaks for itself. Because the statement does not ask the United States to accept the accuracy of the statement, a more detailed response is not required. Note, however, that the pages cited and attributed to Mr. Lerman do not address the production or export of hydrocodimer. Nevertheless, although the United States acknowledges that some hydrocodimer was exported to other refineries, Mr. Lerman did not define the term “significant amounts.” Additionally, the Planned Blending Program required shipments of codimer from other refineries to the Baton Rouge refinery, thereby enabling the production of critical high-octane blending

agencies without any significant contribution of waste in the refinery. U.S. Ex. 19, Kittrell 2013 Report at 25-27.

15. As summed up by Mr. Lerman, the use of any imported raw materials at the Baytown and Baton Rouge refineries “do not translate into waste reductions when the refineries still had to process their entire crude allocations each month and at the same time process and blend additional other raw materials . . . on the contrary, the amount of waste increases.” Ex. 9, Att. B, Lerman 2015 Rpt. at 6, 7, 9.

DISPUTED. The quoted expert report speaks for itself. Because the statement does not ask the United States to accept the accuracy of the statement, a more detailed response is not required. Nevertheless, Mr. Lerman’s opinion is without basis in fact. U.S. Ex. 18, Kittrell 2016 Report at 23-34.

16. According to refinery operations expert Mr. J. Johnson, the Hydrocodimer Plancor 1909 at the Baytown Facility increased overall waste volumes because it generated wastewaters containing spent caustics, sulfides, mercaptans and ammonia. Ex. 8, Att. B, J. Johnson 2012 Rpt. at 69.

PARTIALLY DISPUTED. Plancor 1909 contributed *de minimis* amounts of waste to the site. U.S. Ex. 21, Kittrell 2012 Report at 51-52. The Plancor operated from August 1944 to August 1945. Much of the codimer and catalytic base stock hydrogenated at this plant was produced at other refineries and imported to Baytown for hydrogenation. See U.S. Resp. to Exxon PF ¶ 14. See also U.S. Ex. 20, Kittrell 2012 Report at 61; U.S. Ex. 287, Dr. James Kittrell Dep. 184:1-10 (Apr. 29, 2015).

17. One of the two sources of historical information relied upon by Government expert Mr. Matthew Low for his third “alternative surrogate[] at Baytown”, which proposed surrogate was purported reductions in “oil and grease figures” of only 49%, Govt. Memo. at 57 n.31, was Table II in a 1952 Humble report regarding the nature of its ongoing Effluent Improvement Program at the Baytown refinery. A02347-A02390. However, the historical data set forth in this table and related historical data do not support Mr. Low’s 49% figure, and in fact establish that the reductions in oil concentrations and total oil content in the wastewater effluent at the Baytown refinery were significantly greater. Specifically, Table II in this 1952 Humble report indicates that at the beginning of the Baytown refinery’s effluent improvement program in the late-1940s the average oil content concentrations in the refinery’s wastewater effluent was 181 ppm, but Table II further indicates that the oil content concentrations in the effluent had been reduced to 38 ppm by 1951, and estimated that the oil content concentrations in the effluent would be reduced to 20 ppm by the end of the program. A002362. Therefore, in the approximate four-year period of 1947 to 1951 the Baytown refinery had already reduced the oil content concentrations in the wastewater effluent by approximately 80% (*i.e.*, oil content reduced from 181 ppm to 38 ppm), and Humble estimated significant additional oil content reductions to approximately 90% in the next six years of the program. Further, other subsequent historical data compiled by Humble engineers show that between 1947 and 1957 the Baytown refinery actually reduced the oil content concentrations in the wastewater by 95%, and the total oil content in the

wastewater by greater than 97%. PF ¶¶ 402, 415.

DISPUTED. First, Mr. Low did not propose a “third alternative surrogate.” The reference is not to any statement or calculation made by Mr. Low or “alternative surrogate” proposed by Mr. Low, but to a footnote in the United States’ brief which simply demonstrates, based on other available data, that Mr. White’s waste adjustment multipliers greatly overestimate the response cost impact of Exxon’s waste improvement program on the sludge and waste impoundments, discharge ditches, and groundwater plumes that are the subject of Exxon’s claim.

The 49% refers to reductions in oil and grease at the main discharge outfall and not to any waste reductions in sludge impoundments or groundwater plumes that are the subject of Exxon’s claims at Baytown. Mr. Low did not perform this calculation, but did note that Exxon documents show that oil and grease concentrations at the main outfall were 181 ppm in 1947 and 44 ppm in 1964, but that the 1964 discharge concentration was measured at the outfall after 20,000 gallons per minute of water from Black Duck Bay was introduced to the effluent to dilute the contaminant concentrations at the discharge point. This change was made in 1950 so the 1951 data cited by Exxon in this proposed finding measure concentrations after this dilution. The impact of doubling the volume of effluent just prior to the ultimate discharge point was to effectively reduce by half the contaminant concentrations at the outfall, producing a concentration of about 88 ppm before dilution as the more appropriate measure of the impacts of the improvements cited by Exxon. U.S. Ex. 24, Matthew Low Expert Report 14 n.18, 19 (Aug. 2012).

Mr. Low has stated that “while these improvements in effluent discharges from the refinery may be related to future costs associated with contamination in water bodies in proximity to the refinery outfalls, they do not correlate with the units for which past costs are being claimed, which are upstream of the outfalls and may even have been overshadowed by the fact that certain improvements [in effluent concentrations] resulted in the generation of greater amounts of solids and sludge.” *Id.* at 14, & n.20. An additional change after 1964 was to add three aeration basins and a biological treatment lagoon prior to discharge of effluent and downstream of sludge impoundments and other waste units and groundwater plumes claimed by Exxon. Mr. Low stated that “these changes would not have impacted the costs incurred by Exxon to remediate the Separators and Outfall Canals.” *Id.* at 14 n.20.

18. The second source of historical information relied upon by Mr. Low for his third “alternative surrogate at Baytown”, Govt. Memo. at 57 n.31, was a 1964 Humble engineering report. However, this 1964 report specifically indicated that the refinery achieved a 90% reduction in the oil content in the wastewater by installation and operation of the three new pre separators during the 1950s and even prior to the wastewaters undergoing additional treatment in the refinery’s main separator - Separator 10. PF ¶ 403.

DISPUTED. *See* U.S. Resp. to Exxon Opp. PF ¶ 17. Additionally, the 1964 report cited by Exxon does not indicate that “the refinery achieved a 90% reduction in the oil content in

the wastewater by installation and operation of the three new separators during the 1950s . . .” As stated by U.S. expert Matthew Low,

That reference states:

The pre-separators remove the oil that can be easily separated: they are covered to prevent loss of low boiling hydrocarbons into the atmosphere. Approximately 90 percent of the oil in the waste water is removed at the pre-separators. *This materially reduces the oil lost by evaporations on the master separator.*

U.S. Ex. 22, Matthew Low Supplemental Expert Report 33-34 (Jan. 2017) (citing U.S. Ex. 282, BAYC-00013637 at 13644 and adding emphasis).

Mr. Low explained that

[t]he import of this is that oil, which previously was being lost to evaporation in the master separator, was now being recovered at the covered pre-separators. But because the oil recovered in the pre-separators was the easily separated oil and would have otherwise evaporated, it is unlikely that it would have been in tanks or pipelines in the dock areas or tank farms where the four plume areas are located.

***Id.* at 34. In addition, according to Exxon’s own expert, Peter Gagnon, “if there was evaporation or volatilization of hydrocarbons, then they could not have contributed to contamination in the soil or groundwater.” U.S. Ex. 32, Peter Gagnon Dep. 266:17-20; 271:13-16 (Apr. 11, 2013).**

19. According to expert Mr. Kipp, the operation of the FCC units generated “much more toxic and environmentally persistent wastes throughout the refinery – thereby increasing remediation costs.” Ex. 2, Att. B, Kipp 2016 Rpt. at 14. Mr. Kipp further explained that “[u]nlike modern refineries, FCC units urgently developed to meet wartime needs did not have effective means of separating the very fine catalysts from the heavy oil that was created by severe cracking. The result was a viscous slurry oil comprised largely of toxic, environmentally persistent PAHs [i.e., petroleum aromatic hydrocarbons] mixed with clay catalyst, for which the only technical recourse in WWII was land disposal. This result was necessarily required by Government production demands.” PF ¶ 362.

DISPUTED. See U.S. Resp. to Exxon PF ¶¶ 118, 362-64, 372.

20. The State of Texas specifically established the FOA program in order to help industrial facilities, such as the Baytown Facility, implement required environmental response actions in a much more cost-effective manner; cleanups under the Texas program can now be done much more efficiently than ever before. A010431–A010434.

DISPUTED. In its January 2010 regulatory guidance document, the Texas Commission on Environmental Quality (TCEQ) identified a number of benefits that a FOA offers to a petroleum refinery or chemical plant. A010431-32. None of those benefits included cost-

effectiveness. The potential benefits of the FOA process “may” include more efficient final response actions by deferring completion of Texas Risk Reduction Program Remedy Standards A or B until the “end of active manufacturing operations.” A010434.

21. The cleanup/closure plan for Separator 10 at Baytown specified that Exxon must “remov[e] any remaining contaminated soil from the bottom to a predetermined background level.” A003651.

PARTIALLY DISPUTED. Not disputed that the excerpted portion of the report is accurately quoted. The United States disputes the statement to the extent that it does not adequately characterize the objectives of Exxon’s closure of Separator 10 and its approach used in achieving those objectives. Exxon’s January 1985 closure plan for Separator 10 from which the above quote was taken had two objectives: 1) to minimize the need for further facility maintenance; and 2) to prevent any post-closure release of hazardous constituents to the environment. To accomplish these objectives, Exxon stated that it “*intends to close the basin* by removing any remaining contaminated soil from the bottom to a predetermined background level.” A003651 (emphasis added). Exxon was closing Separator 10, which contained hazardous sludges, to ensure compliance with RCRA interim status regulations. Under RCRA (and state regulations flowing from it), closure of hazardous waste units include two options: (1) “clean closure” with no need for further groundwater monitoring; or (2) closure as landfill with ongoing maintenance and monitoring. U.S. Ex. 27, Alborz Wozniak Expert Report 49 (Feb. 2017). In the case of Separator 10, Exxon chose to “clean close,” which necessitated the excavation of sludge from Separator 10 and any soils at or beneath the bottom of the separator to background levels to ensure that “clean closure” had been achieved.

22. The cleanup/closure plan for the South Landfarm at Baytown specified that the purpose of the plan was to “ensure that all hazardous wastes present in the [South Landfarm] will be contained to the extent necessary to protect human health and the environment[.]” A003627.

PARTIALLY DISPUTED. Not disputed that the excerpted portion of the report is accurately quoted. The United States disputes the statement to the extent that it does not adequately characterize the objectives of Exxon’s closure of the South Landfarm. Exxon’s January 1985 closure plan for the South Landfarm, from which the above quote was taken, had two objectives, not one as implied by Exxon’s Opp. PF ¶ 22: 1) “to ensure that all hazardous wastes present in the SLF will be contained to the extent necessary to protect human health and the environment” and 2) “to minimize[] the need for further maintenance.” A003627.

23. The South Landfarm cleanup/closure report discusses two different alternative caps that could be utilized. A003630.

PARTIALLY DISPUTED. The United States does not dispute that the January 1985 closure plan discusses two alternative caps (i.e., a 4-foot clay cap versus a 3-foot cap of compacted cement modified calcium sulphate). A003630. The United States disputes the

implication that the two sentences in that closure plan describing the calcium sulphate cap constitute an adequate evaluation of possible corrective action alternatives in sufficient detail to meet NCP requirements for completion of a feasibility study. 40 C.F.R. § 300.68(f)-(g) (1986).

24. When the State of Texas approved the cleanup/closure plans for Separator 3M and 10 at Baytown, it modified the procedure by which background concentrations would be determined. A004106-A004107.

PARTIALLY DISPUTED. The United States disputes this statement to the extent that it does not adequately characterize the modifications that the State of Texas made to the procedure for determining background concentrations at Separator 3M and 10. In its September 25, 1985 letter to Exxon approving Exxon's closure plans for these two separators, the Texas Water Commission stated that Exxon would need to collect a minimum of four soil samples for each area of approximately 0.5 acre, A004106-07, rather than the three samples from locations around each separator basin proposed in Exxon's January 1985 closure plans for the two separators, A003658, A003686.

25. In the early 1990s Exxon submitted proposed plans to the State of Texas to address the Upper Outfall Canal, Lower Outfall Canal, and Velasco Street Ditch at Baytown; although the state environmental agency ultimately approved the work, the State of Texas first made several specific directives to Exxon to change the proposed plans, including the requirement to bolster run-off controls and maximize the effectiveness of the liners to be utilized at these units. A005288, A010325.

PARTIALLY DISPUTED. The United States does not dispute that the June 27, 1993 Texas Water Commission letter required Exxon to bolster run-off controls and maximize the liner effectiveness in the Upper Outfall Canal, Lower Outfall Canal, and Velasco Street Ditch. The United States disputes the implication that these directives indicate that an evaluation of alternative cleanout approaches was conducted by Exxon with regard to the Velasco Street Ditch as required by the 1990 NCP regulations (40 C.F.R. § 300.430). There is no documentation indicating that Exxon undertook studies to evaluate alternative approaches for the closure of the Velasco Street Ditch.

26. Exxon issued public notice of the proposed response actions related to the Upper Outfall Canal, Lower Outfall Canal, and Velasco Street Ditch, and "followed all of the public notice and meeting requirements" related to modifying its permit to undertake the activities at the Canals and the Velasco Street Ditch in the early 1990s. A005599.

PARTIALLY DISPUTED. The United States does not dispute that an undated internal Exxon list recommended answers to possible questions from the Texas Natural Resources Conservation Commission contained the above proposed response to a question regarding public comment regarding the Upper Outfall Canal (UOC) and Lower Outfall Canal (LOC) closure plans. The United States disputes the implication that this quote is sufficient evidence that Exxon in fact conducted meaningful, early and continuous public participation as required by the 1990 NCP regulations (Sections 300.155, 300.430(c),

300.430(f)(2), (3) and (6), and 300.435(c)) in either the Outfall Canals or the Velasco Street Ditch. To do so for the Outfall Canals, Exxon would have needed to conduct a number of activities early in the UOC/LOC closure planning process (e.g., prepare a community relations plan) and inform the public throughout the closure evaluation options (such as the decision to delay closure) by activities such as issuing fact sheets. Exxon would have also needed to solicit public input on its final closure plans and ongoing post-closure activities. The only opportunity provided by Exxon for public participation was public notice and a public meeting in October 1991 following Exxon's filing of a RCRA permit modification regarding UOC and LOC cleanup. This public meeting occurred three years prior to the completion of Exxon's sludge characterization and cleanout reports for these two canals. A005596-A005597. With regard to the Velasco Street Ditch, the document cited by Exxon provides no evidence of any public participation for the cleanout of sludge from the Velasco Street Ditch. In fact, none of the documents provided by Exxon suggest that it ever solicited any public input regarding its response actions related to the Velasco Street Ditch.

27. At Baton Rouge, the State of Louisiana provisionally approved plans related to response activities at the Old Silt Pond and Rice Paddy Landfarm, subject to a "thirty (30) period to allow public comment[.]" A008479.

Not Disputed.

28. The Government's cost substantiation expert, Mr. Alborz Wozniak, admitted in his deposition that he has not considered the case law in rendering his opinions. A010440.

DISPUTED. As an initial matter, Mr. Wozniak was not designated as a cost substantiation expert. The United States also disputes the statement because it mischaracterizes Mr. Wozniak's deposition testimony. In that testimony, Mr. Wozniak stated that he had not been asked to consider case law by the government and that furthermore to do so would have been inappropriate because "*I feel that that's stepping into a legal arena, and I'm not a lawyer.*" A010440 (302:10-12).

29. Mr. Wozniak also admitted that he was not sure if he reviewed certain CERCLA- related guidance, including specifically the "RCRA-CERCLA Parity Guidance" (previously produced as Exhibit 17). A010438.

DISPUTED. The United States disputes the statement because it mischaracterizes Mr. Wozniak's deposition testimony. In that testimony, Mr. Wozniak stated the RCRA-CERCLA Parity Guidance' document "*is familiar to me.*" A010438 (272:13).

30. Mr. Wozniak testified that he believed that the presence of an "immediate threat has become the important distinguishing factor between when a removal authority may be appropriate or a remedial action may be appropriate." A010437.

Not Disputed.

31. Mr. Wozniak further testified that whether comments were actually received in prior opportunities for public comment was not a relevant fact in determining whether and to what extent public participation opportunities should continue. A010436.

PARTIALLY DISPUTED. The United States disputes the statement to the extent that it mischaracterizes Mr. Wozniak's deposition testimony on this matter. In his testimony, Mr. Wozniak stated that the absence of public comment in and of itself does not mean that public participation requirements had been met. The effectiveness of public participation efforts *"depends on the circumstances of how, say, effectively the information was disseminated, if the information was -- the availability of a document to comment on was published in a way where the public had no idea that there was even an activity going on nearby, they may not be aware of it even to comment on it. So the absence of comments by itself without understanding the larger scenario doesn't necessarily inform me as to whether the public, in fact, is interested and has something to share."* A010436 (59:4-15).

32. The NACC lawsuit was filed on July 28, 1995. A010442.

Not Disputed.

33. On February 17, 1999, an Exxon employee named Dick Cureton testified that he was the business manager for the NACC group, which developed the NACC damages database. Govt. Ex. 28, Cureton Dep. 54-59.

PARTIALLY DISPUTED. The United States does not dispute this fact, but notes Mr. Cureton's testimony was that the NACC damages database was developed by a subgroup within Exxon's legal department for purposes of litigation. U.S. Ex. 28, Dick Cureton Dep. Vol. I 58-59 (Feb. 17, 1999).

34. Dick Cureton further testified that as of the date of his testimony (February 17, 1999), the NACC database contained all of the environmental costs for 1997. Govt. Ex. 28, Cureton Dep. 40, 112.

PARTIALLY DISPUTED. The United States does not dispute that, as of February 17, 1999, the NACC damages database contained all of Exxon's environmental costs for 1997. But the United States notes that Mr. Cureton also testified that Exxon was continuing to update the database and Exxon was conducting ongoing work to make the database more accurate. U.S. Ex. 28, Cureton Dep. Vol. I at 76. In other words, the database was not a static creation as of January 1, 1998 (and it is unlikely Exxon would have entered all 1997 costs into the database before January 1, 1998). *Id.*

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Respectfully submitted,
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